

INFORMATION SHEET

ORDER NO. R5-2005-_____
NPDES NO. CA0082201
KAWEAH RIVER ROCK CO.
SAND AND GRAVEL PLANT
TULARE COUNTY

BACKGROUND INFORMATION

Kaweah River Rock Co. (hereafter Discharger) owns and operates a sand and gravel mining and processing plant along the St. Johns River two miles southeast of Woodlake. Infiltrated groundwater at the bottom of the sand and gravel quarry is intercepted by ditches and then gravity flows to a settling pond (Pond No. 1). Storm water also flows to Pond No. 1.

Water from Pond No. 1 is discharged to the St. John's River, a Valley Floor Water and water of the United States. Wash water from the processing is discharged to a settling pond (Pond No. 2) and recycled. Pond No. 2 is about 600 feet from the eastern boundary of the plant. No wash water is discharged into the St. Johns River.

The St. Johns River is a distributary of the Kaweah River and it receives water from Lake Kaweah. The St. Johns River flows to the west for about 24 miles before it drains into East Branch Cross Creek about one mile west of Road 80. Based on data from the Kaweah Delta Water Conservation District, monthly flows of the St. Johns River average 10,100 cubic feet per second.

Depth to the first encountered groundwater (unconfined) in the area ranges from 10 to 20 feet below ground surface; groundwater flows to the west-southwest.

BENEFICIAL USES OF THE RECEIVING WATER

The Basin Plan designates the beneficial uses of Valley Floor Waters, such as St. Johns River (Hydrologic Area 558.10) as:

- agricultural supply (AGR);
- industrial service supply (IND);
- industrial process supply (PRO);
- water contact recreation (REC-1);
- non-contact water recreation (REC-2);
- warm freshwater habitat (including spawning) (WARM);
- wildlife habitat (WILD);
- support of rare, threatened, or endangered species (RARE); and
- groundwater recharge (GWR).

The beneficial uses of the underlying groundwater, as identified in the Basin Plan for the Kaweah Basin DAU 242 are: MUN, AGR, IND, PRO, REC-1, and REC-2.

REASONABLE POTENTIAL ANALYSIS FOR CTR CONSTITUENTS

On 18 August 2001 the Discharger submitted effluent and receiving water data for priority pollutants to the Regional Board for a sample taken on 22 May 2001. On 17 June 2002 the Discharger submitted effluent and receiving water data for priority pollutants for a sample taken on 16 April 2002.

The RPA for CTR constituents was based on the data from samples collected on 22 May 2001 and 16 April 2002. Based on the RPA methodology in the SIP and USEPA's *Technical Support Document for Water Quality Based Toxics Control*, no constituents have been found to have reasonable potential to cause or contribute to an excursion above water quality objectives or water quality criteria in the receiving water. Many of the constituents were not detected in the effluent and many do not have applicable numeric water quality criteria or objectives to be compared against the MEC.

The results of the RPA are summarized in Table 1 below with detected constituents in bold.

TABLE 1 – CTR RPA SUMMARY

CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit (µg/L)	Maximum Background Concentration or Minimum Detection Limit MDL (µg/L)	Lowest (most stringent) Criterion	RPA Result ^(1,2)
1	Antimony	2	2	610	No
2	Arsenic	5	2	150.00	No
3	Beryllium	1	1	No Criteria	Uo
4	Cadmium	1	1	0.10	No
5a	Chromium (III) (or total Cr)	5	1	70.83	No
5b	Chromium (VI)	0.2	0.2	11.43	No
6	Copper	5	5	3.05	No
7	Lead	5	5	0.60	No
8	Mercury	0.0064	0.0096	0.051	No
9	Nickel	10	10	17.23	No
10	Selenium	2	2	5.00	No
11	Silver	10	10	0.43	No
12	Thallium	1	1	6.30	No
13	Zinc	50	50	39.51	No

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CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit	Maximum Background Concentration or Minimum Detection Limit MDL	Lowest (most stringent) Criterion	RPA Result ^(1,2)
14	Cyanide	0.01	0.01	5.20	No
15	Asbestos	5.22	0.2	No Criteria	Uo
16	2,3,7,8-TCDD (Dioxin)	0.0000017	0.0000016	0.000000014	No
17	Acrolein	No data	No data	21	Ud
18	Acrylonitrile	No data	No data	0.66	Ud
19	Benzene	5	5	71.00	No
20	Bromoform	5	5	360.00	No
21	Carbon Tetrachloride	5	5	4.40	No
22	Chlorobenzene	5	5	50	No
23	Chlordibromomethane	5	5	34.00	No
24	Chloroethane	5	5	No Criteria	Uo
25	2-Chloroethylvinyl Ether	No data	No data	No Criteria	Ud
26	Chloroform	5	5	1240	No
27	Dichlorobromomethane	5	5	46.00	No
28	1,1-Dichloroethane	5	5	No Criteria	Uo
29	1,2-Dichloroethane	5	5	99.00	No
30	1,1-Dichloroethylene	5	5	3.20	No
31	1,2-Dichloropropane	5	5	39.00	No
32	1,3-Dichloropropylene	5	5	244	No
33	Ethylbenzene	5	5	29000.00	No
34	Methyl Bromide	5	5	4000.00	No
35	Methyl Chloride	5	5	No Criteria	Uo
36	Methylene Chloride	25	25	1600.00	No
37	1,1,2,2-Tetrachloroethane	5	5	11.00	No
38	Tetrachloroethylene	5	5	8.85	No
39	Toluene	5	5	200000.00	No
40	1,2-Trans-Dichloroethylene	5	5	140000.00	No
41	1,1,1-Trichloroethane	5	5	No Criteria	Uo
42	1,1,2-Trichloroethane	5	5	42.00	No
43	Trichloroethylene	5	5	81.00	No
44	Vinyl Chloride	5	5	525.00	No
45	Chlorophenol	5	5	400.00	No
46	2,4-Dichlorophenol	5	5	790.00	No
47	2,4-Dimethylphenol	5	5	2300.00	No
48	2-Methyl-4,6-Dinitrophenol	25	25	765.00	No
49	2,4-Dinitrophenol	50	50	14000.00	No
50	2-Nitrophenol	5	5	No Criteria	Uo
51	4-Nitrophenol	25	25	No Criteria	Uo
52	3-Methyl-4-Chlorophenol	10	10	No Criteria	Uo

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CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit	Maximum Background Concentration or Minimum Detection Limit MDL	Lowest (most stringent) Criterion	RPA Result ^(1,2)
53	Pentachlorophenol	25	25	5.47	No
54	Phenol	10	10	4600000.00	No
55	2,4,6-Trichlorophenol	5	5	6.50	No
56	Acenaphthene	5	5	520	No
57	Acenaphthylene	5	5	No Criteria	Uo
58	Anthracene	5	5	110000.00	No
59	Benzidine	No data	No data	0.00054	Ud
60	Benzo(a)Anthracene	5	5	0.05	No
61	Benzo(a)Pyrene	5	5	0.05	No
62	Benzo(b)Fluoranthene	5	5	0.05	No
63	Benzo(ghi)Perylene	5	5	No Criteria	Uo
64	Benzo(k)Fluoranthene	5	5	0.05	No
65	Bis(2-Chloroethoxy)Methane	5	5	No Criteria	Uo
66	Bis(2-Chloroethyl)Ether	25	25	1.40	No
67	Bis(2-Chloroisopropyl)Ether	50	50	170000.00	No
68	Bis(2-Ethylhexyl)Phthalate	5	5	5.90	No
69	4-Bromophenyl Phenyl Ether	5	5	No Criteria	Uo
70	Butylbenzyl Phthalate	5	5	5200.00	No
71	2-Chloronaphthalene	5	5	4300.00	No
72	4-Chlorophenyl Phenyl Ether	5	5	No Criteria	Uo
73	Chrysene	5	5	0.05	No
74	Dibenzo(a,h)Anthracene	5	5	0.05	No
75	1,2-Dichlorobenzene	5	5	763	No
76	1,3-Dichlorobenzene	5	5	763	No
77	1,4-Dichlorobenzene	5	5	763	No
78	3,3'-Dichlorobenzidine	10	10	0.08	No
79	Diethyl Phthalate	5	5	120000.00	No
80	Dimethyl Phthalate	5	5	2900000.00	No
81	Di-n-Butyl Phthalate	5	5	12000.00	No
82	2,4-Dinitrotoluene	20	20	9.10	No
83	2,6-Dinitrotoluene	20	20	No Criteria	Uo
84	Di-n-Octyl Phthalate	5	5	No Criteria	Uo
85	1,2-Diphenylhydrazine	No data	No data	0.54	Ud
86	Fluoranthene	5	5	370.00	No
87	Fluorene	5	5	14000.00	No
88	Hexachlorobenzene	5	5	0.00077	No
89	Hexachlorobutadiene	5	5	50.00	No
90	Hexachlorocyclopentadiene	No data	No data	17000.00	Ud
91	Hexachloroethane	5	5	8.90	No

CTR Parameter #	PRIORITY POLLUTANTS	Maximum Effluent Concentration or Minimum Method Detection Limit	Maximum Background Concentration or Minimum Detection Limit MDL	Lowest (most stringent) Criterion	RPA Result ^(1,2)
92	Indeno(1,2,3-cd) Pyrene	5	5	0.05	No
93	Isophorone	5	5	600.00	No
94	naphthalene	5	5	620	No
95	Nitrobenzene	25	25	1900.00	No
96	N-Nitrosodimethylamine	No data	No data	8.10	Ud
97	N-Nitrosodi-n-Propylamine	25	25	1.40	No
98	N-Nitrosodiphenylamine	5	5	16.00	No
99	Phenanthrene	10	10	No Criteria	Uo
100	Pyrene	5	5	11000.00	No
101	1,2,4-Trichlorobenzene	5	5	50	No
102	Aldrin	5	5	0.00014	No
103	alpha-BHC	0.1	0.1	0.01	No
104	beta-BHC	0.1	0.1	0.05	No
105	gamma-BHC	0.1	0.1	0.06	No
106	delta-BHC	0.1	0.1	No Criteria	Uo
107	Chlordane	2	2	0.00059	No
108	4,4-DDT	0.1	0.1	0.00059	No
109	4,4-DDE	0.1	0.1	0.00059	No
110	4,4-DDD	0.1	0.1	0.00084	No
111	Dieldrin	0.1	0.1	0.00014	No
112	alpha-Endosulfan	0.1	0.1	0.06	No
113	beta-Endosulfan	0.1	0.1	0.06	No
114	Endosulfan Sulfate	0.1	0.1	240.00	No
115	Endrin	0.1	0.1	0.04	No
116	Endrin Aldehyde	0.1	0.1	0.81	No
117	Heptachlor	0.1	0.1	0.00021	No
118	Heptachlor Epoxide	0.1	0.1	0.00011	No
119-125	PCBs sum ⁽³⁾	0.2	0.2	0.00017	No
126	Toxaphene	2	2	0.0002	No

- 1) RP =Yes, if either MEC or Background > WQO/WQC.
 RP = No, if (1) both MEC and background < WQO/WQC or (2) no background and all effluent data non-detect, or no background and MEC<WQO/WQC.
- 2) RP = Ud (undetermined due to lack of effluent monitoring data).
 RP = Uo (undetermined if no objective or criterion promulgated).
- 3) PCBs sum refers to sum of PCB 1016, 1221, 1232, 1242, 1248, 1254, and 1260

EFFLUENT LIMITATIONS

The effluent limitations established under the previous Order continue to be appropriate for this Discharger, except as stated below.

Flow: The maximum permitted flow was reduced from 2.25 mgd to 1.99 mgd at the request of the Discharger.

pH: The Basin Plan includes numeric water quality objectives that the pH “...*not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.*” St. Johns River is subject to periods of little to no flow, at which times there is no assimilative capacity. Therefore, this Order requires that effluent pH be within the limits of 6.5 to 8.3 units.

Conductivity: Monitoring data from 1999 to 2003 indicates an increase in EC concentrations ($\mu\text{mhos/cm}$) between the upstream and downstream monitoring stations within St. Johns River. On several occasions the increase was in exceedance of the Basin Plan EC objective of 175 $\mu\text{mhos/cm}$ during the irrigation season. Due to these exceedances, the Regional Board finds the discharge to have reasonable potential to exceed water quality objectives. Therefore, this Order establishes a receiving water limitation of 175 $\mu\text{mhos/cm}$ during the irrigation season. The discharge may not cause exceedance of the receiving water EC limitation, even during periods where St. John’s Creek is not flowing (i.e. the effluent must be less than 175 $\mu\text{mhos/cm}$ during “low” or “no flow” conditions).

This Order establishes an effluent limitation of 1000 $\mu\text{mhos/cm}$ for EC based on the Basin Plan objective for surface water discharges. The effluent limitation has been established as a monthly average.

Chloride and Boron: This Order requires effluent monitoring for chloride and boron to determine whether effluent limits more stringent than the maximums in the Basin Plan are necessary for these constituents.

RECEIVING WATER LIMITATIONS

The Basin Plan establishes water quality objectives that apply to all surface waters in the Basin. This Order includes Receiving Water Limitations for: bacteria, biostimulatory substances, chemical constituents color, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, turbidity, chloride, electrical conductivity, and dissolved oxygen based on the applicable narrative and numeric water quality objectives contained in Basin Plan.

GROUNDWATER LIMITATIONS

In accordance with the Antidegradation Policy, this Order does not allow the discharge to cause background levels of pollutants to increase. This Order requires that the Discharger complete a groundwater study to determine background levels for pollutants of concern and whether ongoing discharges have impacted groundwater.

MONITORING AND REPORTING REQUIREMENTS

The monitoring and reporting requirements established under the previous Order continue to be appropriate for the Discharger and are carried over in this Order. The Monitoring and Reporting Program under this revised Order adds requirements for monitoring flow of the receiving water when samples are taken, groundwater monitoring, priority pollutant monitoring, and acute and chronic toxicity monitoring.

- The requirement to record the flow (in million gallons per day) monthly when receiving water samples are collected at the upstream and downstream receiving water sample stations, has been added to this Order.
- Quarterly groundwater monitoring requirements have been added to this Order.
- As required by the State Implementation Policy (SIP) this Order requires periodic effluent and receiving water monitoring for priority pollutants/dioxins one time no more than 365 days and no less than 180 days prior to expiration of this Order.
- Acute and chronic toxicity monitoring is required once during the duration of this Order to determine whether the effluent is contributing toxicity to the receiving water.

ANTIDEGRADATION AND CEQA CONSIDERATIONS

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

The action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, *et seq.*) in accordance with Section 13389 of the California Water Code.